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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
LAPAGE, MICHAEL P				
ART UNIT		PAPER NUMBER		
2886				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,984

Applicant(s)

VROOMEN ET AL.

Examiner

MICHAEL LAPAGE

Art Unit

2886

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 30 May 2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-10 are presented for examination.

Specification

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3. The disclosure is objected to because of the following informalities:
 - a. Page 5, line 26 "component 6" should read --component 16--.
 - b. Page 6, line 3 "component 6" should read --component 16--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 5-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yazawa (U.S. Patent No. 6,195,454 B1).

As to claim 1, Yazawa discloses and shows in figure 2, a machine (1) suitable for placing a component on a substrate, the machine comprising an imaging device (7), a placement element (8) connected to the imaging device, as well as an optical system (i.e. the examiner is interpreting the optical system to be made up of 7, and 8 and CPU 60 from figure 7) for detecting the position of the component supported by the placement element by means of the imaging device, characterized in that the optical system comprises at least a marking element (6), in which, in operation, the marking element and the component (i.e. TCP 3 not shown in figure 2) can be displayed simultaneously by means of the optical system in an image to be made by means of the imaging device (col. 5, line 66 thru col. 6 line 4; col. 6, lines 27-44).

As to claims 2 and 8, Yazawa discloses a machine characterized in that the machine comprises at least a calibration marking element, in which the marking element is located in a first focal plane whereas the calibration marking element is located in a second focal plane, which marking elements, in operation, can be displayed simultaneously in an image to be made by means of the imaging device (col. 3, lines 37-40; col. 6, lines 27-44; where both fields of view F could be interpreted to be in separate focal planes and further where one of the marks 6 could be interpreted as the calibration marking element).

As to claims 5 and 10, Yazawa discloses and shows in figure 2, a machine, characterized in that the imaging device (7) comprises a marking element (6) connected to the imaging device (i.e. where the whole apparatus in figure 2 is interconnected), which marking element, in operation, can be displayed simultaneously with the marking element connected to the optical system in an image made by means of the imaging device (col. 6, lines 27-44; where two of the marks 6 of the apparatus can be imaged by imaging means simultaneously and where all the parts are interconnected).

As to claim 6, Yazawa discloses and shows in figure 2, a method for placing a component (i.e. TCP 3 not shown in figure 2) on a substrate by means of a machine, the component being picked up by means of the placement element (8), then by means of an image device (7) and an optical system (i.e. the examiner is interpreting the optical system to be made up of 7, and 8 and CPU 60 from figure 7) an image being made of the component picked up by the placement element, after which the component is placed on the substrate, characterized in that in the image a marking element (6) connected to the optical system (i.e. where the marking element is inherently connected to the optical system) is as well as the component is displayed after which the position of the component (TCP 3) relative to the optical system is determined (i.e. by CPU 60) by means of the marking element (col. 5, line 66 thru col. 6 line 4; col. 6, lines 27-44).

As to claim 7, Yazawa discloses and shows in figure 2, a method characterized in that a further image is made by means of the imaging device, from which further image the desired position of the component on the substrate is determined, after which the component is placed in the desired position (col. 6, lines 27-44; where the examiner

is interpreting that since imaging apparatus 7 has actually 2 detectors one of the images from the detectors can be interpreted as the further image).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yazawa in view of Ogawara (Japanese Patent No. 01241680 A) (provided by applicant).

As to claims 3 and 9, Yazawa does disclose and show in figure 2, a machine, having a placement element (8) (col. 6, lines 28-30).

As to claims 3 and 9, Yazawa does not explicitly disclose a machine, characterized in that the placement element comprises a marking element connected to the placement element which marking element, in operation, can be displayed simultaneously with the component in an image made by means of the imaging device.

However, Ogawara does disclose and shows in figure 2 and in (Abstract), a machine characterized in that the placement element (fig. 1, item 1) comprises a marking element (2) connected to the placement element which marking element, in operation, can be displayed simultaneously with the component. (i.e. where as disclosed when parts 2a and 1 pass into recognizing area they are momentarily

image-picked up (i.e. simultaneously imaged)) in an image made by means of the imaging device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yazawa with a further alignment mark on the placement element in order to provide additional accuracy for proper alignment of the component and substrate.

As to claim 4, Yazawa does not disclose a machine, characterized in that the marking element connected to the placement element can be optically displayed in a plane in which there is a component during operation.

However, Ogawara does disclose and show in figure 2 and in (Abstract) a machine, characterized in that the marking element connected to the placement element can be optically displayed in a plane in which there is a component during operation (i.e. where as shown the point M and N can be simultaneously detected and analyzed for proper alignment).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yazawa by allowing both the placement element to be displayed in the same plane as the component during operation to provide the advantage of reduced calculations from the lack of focusing adjustment that would be required if the mark and component were in separate planes.

Prior Art made of Record

1. The prior art made of record and not relied upon is considered pertinent to applicants disclosure.

a. Beatson et al. (U.S. Patent No. 6,412,683 B1) discloses a similar component placing device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LAPAGE whose telephone number is (571)270-3833. The examiner can normally be reached on Monday Through Friday 7:30AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on 571-272-2287. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2886

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael LaPage/
Examiner, Art Unit 2886

/TARIFUR R CHOWDHURY/
Supervisory Patent Examiner, Art Unit 2886